

Are You Correctly Interpreting Your Survey Evaluation Data?

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-PLEASE RATE YOUR SATISFACTION WITH OUR SERVICE...



Trainee Reactions & Self-Assessment

- Reactions are students' satisfaction with the instructional experience
 - I enjoyed the training.
 - The skills taught in training are relevant to my job.
- Self-assessments of knowledge are students' ratings of their knowledge of the course material
 - I am able to perform the skills taught in training.
 - I increased my knowledge as a result of training.





Research Questions

- Relationship with learning
 - Do satisfied students learn more than dissatisfied students?
 - Are self-assessments of knowledge accurate?
- What information can be gleaned from survey data?





Meta-Analysis

- Statistical technique for summarizing the research in a domain
- Average across previous research results





Meta-Analytic Notional Example

Research Report	Sample Size	r	Total
Arbaugh	150	.05	$r = .22$
Jackson	288	.26	
Manning	35	-.02	
Smith	71	.18	





Participant Demographics

- 68,245 trainees
- 354 research reports
- Types of courses
 - 68% college courses
 - 27% corporate training courses
 - 5% military training courses
- Average age = 30 years





Predicting Trainee Reactions

- Trainee characteristics
 - Pretraining motivation
 - Anxiety
- Situational characteristics
 - Instructor style
 - Human interaction during training

Which antecedent has the strongest effect on reactions?





Antecedents Results

- Trainee characteristics had moderate effects:
 - Pretraining motivation $r = .42^*$
 - Anxiety $r = -.31^*$
- Situational characteristics had strong effects:
 - Instructor style $r = .66^*$
 - Human interaction $r = .56^*$





How can instructors improve their course evaluations?





Recommendations

- Aim for an open, relaxed style to make trainees comfortable
- Trainees should be encouraged to ask questions and comment on the training material
- Encourage discussion among students
- Emotion control and relaxation exercises reduce anxiety and may improve reactions





Trainee Reactions & Learning

- Three learning outcomes
 - Factual knowledge
 - Skill-based knowledge
 - Training transfer





Do satisfied students learn more than
dissatisfied students?





Learning Results

- Factual knowledge $r = .12^*$
- Skill-based knowledge $r = .15^*$
- Training transfer $r = .10^*$
- After controlling for pretraining knowledge, reactions accounted for:
 - 2% of the variance in factual knowledge
 - 5% of the variance in skill-based knowledge
 - 0% of the variance in training transfer

The answer is clearly no!



DEPRESSION
CLINIC



RATE YOUR
EXPERIENCE



HOW DID OUR
SERVICES MAKE
YOU FEEL?





Outcomes of Trainee Reactions

- Are trainees more motivated when they enjoyed the course?
 - Motivation - trainees' desire to reach a goal
- Are trainees more confident in their ability to transfer the material to their job if they enjoyed the course?
 - Self-efficacy - trainees' perceptions of their ability to reach a goal





Affective Outcomes Results

- Motivation $r = .68^*$
- Self-efficacy $r = .31^*$
- After controlling for pretraining knowledge and affect, reactions accounted for:
 - 20% of the variance in post-training motivation
 - 6% of the variance in post-training self-efficacy





Implications

- Reactions invaluable when goal of training is to change attitudes or improve motivation
 - Ethics training
 - Safety training
 - Motivational speakers
 - Diversity training





**-YOU DON'T HAVE TO BE LOSERS!
WITH A LITTLE HARD WORK, DEDICATION,
AND MOTIVATION, YOU COULD ALL BE MEDIOCRE!**



Should organizations use trainee reactions to make promotion decisions?



-HOW WAS TRAINING?

*-GREAT! WE GOT OUT
EARLY*





Understanding Trainee Reactions

- Highly sensitive to trainees' perceptions of their training environment
- Predict changes in attitudes
- Small effect on learning
- Provide different information about the quality of training than learning measures





Are self-assessments of knowledge
accurate?





Learning Results

$$r = .34^*$$

Self-assessment is only moderately related to learning







Interpreting Self-Assessments

- What information is captured with self-assessments of knowledge?
- Motivation
 - $r = .59^*$
- Trainee reactions
 - $r = .51^*$

Self-assessment capture motivation and satisfaction, not actual knowledge levels





Increasing Correlation with Learning

- Similarity of self-assessment and learning measure
- Feedback on performance
- Practice self-assessing and feedback on accuracy





Similarity of Measures

- Similar measures
 - Self-report and learning measures were referring to the exact same criterion
 - $r = .47^*$
- Dissimilar measures
 - Self-report and learning measured referred to different criteria
 - $r = .24^*$





Feedback on Training Performance

- No feedback was provided
 - $r = .14$
- Trainees received feedback on their performance during training
 - $r = .28^*$





Feedback on Accuracy

- One self-assessment
 - $r = .29^*$
- Two or more self-assessments, no feedback
 - $r = .30^*$
- Two or more self-assessments + feedback
 - $r = .51^*$





Recommendations

- Self-assessment...
 - Should NOT be used as a substitute for objective learning measures
 - Is more useful as an indicator of how learners feel about a course
 - Is an important skill for succeeding in learner-controlled training
 - Foster accuracy by providing feedback on self-assessments





Implications

- Goal of an evaluation effort should guide the selection of outcome measures
- Reactions predict attitude change and can be used to provide feedback to instructors
- Self-assessments should not be included in course evaluations
 - One goal of training should be building accurate self-assessments





Learn More?

Sitzmann, T., Brown, K. G., Casper, W. J., Ely, K., & Zimmerman, R. (2008). A review and meta-analysis of the nomological network of trainee reactions. *Journal of Applied Psychology, 93*, 280-295.

Sitzmann, T., Ely, K., Brown, K. G., & Bauer, K. N. (in press). Self-assessment of knowledge: An affective or cognitive learning measure? *Academy of Management Learning and Education*.





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